

HAYDEN AREA REGIONIAL SEWER BOARD

Protecting the Aquifer Since '88

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Ken Windram, Administrator
Phone (208) 772-0672

August 24, 2012

Ms. June Bergquist
Idaho DEQ
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

RE: HARSB'S ANTICIPATED NPDES COMPLIANCE SCHEDULE

Dear Ms. Bergquist:

Hayden Area Regional Sewer Board (HARSB) appreciates this opportunity to provide input regarding the compliance schedule that will be associated with EPA's reissuance of our 1999 National Pollutant Discharge Elimination System (NPDES) permit.

This letter addresses the compliance schedule required for total phosphorus, ammonia and carbonaceous biological oxygen demand (CBOD) along with other significant new permit conditions. It does not address polychlorinated biphenyls (PCBs) or dioxins, for which we understand EPA is not proposing numeric limits in HARSB's NPDES permit. HARSB does not believe PCB or dioxin limits are justified and reserves the right to challenge the imposition of any such limits. The letter also does not address lead, cadmium and zinc, constituents for which we understand the draft NPDES permit will include numeric limits based on the Idaho Department of Environmental Quality's (IDEQ) interpretation of IDAPA Section 58.01.02.055.04. Consistent with the attached analysis (Attachment A) our counsel has provided to IDEQ, HARSB disagrees that these limits are needed, and reserves its rights to challenge such limits or to seek a variance from such limits. The imposition of numeric limits for PCBs, dioxins, cadmium, lead and/or zinc may also adversely affect HARSB's ability to implement the compliance schedule discussed below. In the event limits for lead cadmium and zinc are retained, HARSB requests that IDEQ include a compliance schedule to meet them based on further input from HARSB.

The sections below discuss the following issues in turn: (1) the background of HARSB's actions to comply with the Spokane River/Lake Spokane Dissolved Oxygen Total Maximum Daily Load (D.O. TMDL); (2) a narrative describing HARSB's proposed compliance efforts; and (3) proposed language for the compliance schedule.

Background of HARSB Actions to Comply with the D.O. TMDL

HARSB serves the cities of Hayden and Hayden Lake, the Kootenai County Airport and the Hayden Lake Recreational Water and Sewer District (HLRWSD). In 2007,

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EPA proposed a draft NPDES permit for HARSB with limits that HARSB considered to be acceptable. When EPA withdrew the draft permit to allow the Washington Department of Ecology (WDOE) to revise the D.O. TMDL, it created significant uncertainty for HARSB for several reasons.

First, HARSB has substantial financial constraints. Particularly, in 2008, HARSB built a biological capacity upgrade in anticipation of the 10-year needs of our client communities. The upgrade included an additional oxidation ditch and secondary clarifier. The secondary treatment biological capacity upgrades cost HARSB well over \$3 million through completion in late 2008. Second, HARSB's reuse farm (Reuse Farm) currently irrigates 100% of the effluent water when the Spokane River flow falls below 2,000 cubic feet per second (CFS). The summer time HARSB facility flows are approaching the capacity of the existing reuse farm system. Third, HARSB reclaims aerobic digested biosolids by land application on the Reuse Farm and in the State of Washington, but our solids dewatering processing cannot meet the expanded plant capacity and there is no dewatering redundancy. Finally, our outfall transmission pipe is approaching its capacity limit and is under design for near-term expansion. Expanding the transmission pipe will likely drain HARSB's cash reserves completely.

As you know, WDOE issued the final D.O. TMDL in February, 2010. Following a challenge by HARSB and others, EPA agreed, among other things, to propose phosphorus limits in the draft permits equivalent to 50 µg/L on a seasonal average at 3.2 million gallons per day (MGD). This analysis assumes HARSB will receive its full allocation based on the settlement with EPA, and that trading and/or offsets will be available options. We further assume that HARSB will be given the full benefit of any approved bio-availability studies showing that not all of the phosphorus in HARSB's discharge affects dissolved oxygen levels in the Spokane River.

For several reasons, the limits required by the D.O. TMDL necessitate a compliance schedule. For one thing, the 50 ug/l seasonal average at 3.2 mgd is at the limit of technologically achievable levels. To reach these levels, HARSB will implement a phased design and construction approach will involve the following steps to best assure compliance: phosphorus treatment design, pilot testing, design updates, new technology equipment construction as well as operation testing in a multi-step process. In addition, we anticipate the lower ammonia and/or CBOD limits in the new NPDES permits could require HARSB to install additional treatment technology beyond what will be needed for phosphorus. Only detailed pilot testing can determine specific performance to meet the new D.O. TMDL criteria. HARSB serves the cities of Hayden and Hayden Lake, the Kootenai County Airport and the Hayden Lake Recreational Water and Sewer District under an Idaho joint powers agreement government entity and has no bonding authority under Idaho law. Therefore, HARSB does not control its funding to any significant extent, and requests the maximum flexibility permitted by law to ensure that the necessary funding is in place before HARSB is required to construct the treatment facilities.

A major change with the D.O. TMDL and the settlement expanded the 50 µg/L compliance period outside of the growing season. This change dramatically devalues

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our reuse program and the reuse expansion plans envisioned by the Rathdrum Prairie Wastewater Master Plan (RPWMP). The stringent 2010 WLAs now extend four months longer than in 2007 and at least three months beyond our region's growing season. In addition, the Rathdrum Prairie Special Resource Aquifer in Idaho includes a non-degradation provision that does not allow irrigation beyond the growing season. Due to these restrictions, HARSB must rely more heavily on river discharge and use of the most advanced technologies to meet its expected effluent limits. Water reuse will only provide a modest advantage for diverting a small portion of our oxygen-demanding constituents during summer months so they do not count against us for the entire permit seasonal averaging period. HARSB reuse will now be even more expensive and less practical because of the additional land and storage requirements, while actually providing less capacity benefit.

We continue to work with WDOE, EPA, the Spokane Tribe, and other permit holders to incorporate the bio-availability study results of various forms of phosphorus in the Spokane River system. The University of Washington discovered that the EPA method for Total Phosphorus Test which the acidification / digestion step could be measuring Phosphorus that may not be available for the plants in the Spokane River or Lake Spokane as dissolved oxygen depleting components. We feel strongly that the EPA Method for Total Phosphorus Test does not represent the actual Dissolved Oxygen depleting Phosphorus component. The Total Phosphorus Test needs to be replaced with a more accurate phosphorus dissolved oxygen depleting measuring test.

Those familiar with municipal (public) systems recognize that each entity has its own unique situations and local constraints to meet compliance. Those challenges include financing through sewer fee adjustments or public-approved bond elections, local regulatory approvals, treatment system design and construction procurement all while maintaining full-time, on-going wastewater treatment operations. HARSB is committed to protecting the water quality in the Spokane River; however, enforcing the most stringent phosphorus limits in the nation, in one permit cycle, would place an impossible requirement on HARSB. Therefore, the schedule below outlines a phased approach with achievable steps to meet the anticipated final permit limits over a 10-year time frame.

Narrative of Compliance Efforts

The following narrative describes the efforts HARSB plans to undertake to implement the anticipated phosphorus, ammonia and CBOD limits along with other permit requirements. This narrative is significantly more detailed than would be appropriate in a compliance schedule, but gives IDEQ an idea of HARSB's detailed implementation strategy. Of course, the details may change in compliance with the approved compliance schedule as implementation proceeds.

Year 1: EPA Plans Development, Funding Approval and Facility Phase 1 Design.

During the first year, HARSB will prepare the sampling Quality Assurance Project Plan (QAPP) and implement it within 90 days after the effective date of the final permit.

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HARSB will prepare Operation and Maintenance Plan (O&M) and implement it within 180 days after the effective date of the final permit. HARSB will prepare the Phosphorus Management Plan (PMP) during the first year and implement it within 18 months after the effective date of the final permit. HARSB will prepare the Emergency Response and Public Notification Plan (ERPMP) and implement it within 180 days after the effective date of the final permit. HARSB would begin to develop the Undesirable Pollutants and Industrial Users Control Plan. HARSB would prepare a Toxic Management Plan (TMP) within 180 days after the effective date of the final permit. The TMP must be implemented within one year after the effective date of the final permit. The HARSB Facility will meet the new NPDES permit conditions on the effective date of the final permit except for the constituents outlined in the compliance schedule. New surface water and effluent water sampling, testing and monitoring will also begin during the first year after the effective date of the final permit.

As part of the compliance schedule, HARSB will prepare a Facility Plan that addresses expected growth rates, changes in permit conditions, design parameters, and compliance conditions for the next 10-20 years. HARSB will also update the financial analysis to support rate increases and/or a bond election needed to fund projected improvements.

When the Facility Plan is accepted and approved by IDEQ and EPA, HARSB will conduct public hearings for rate and fee increases to fund the BNR, and reuse expansion work, as well as re-apply for State Revolving Fund loans. The sewer rate and fee increases plus external financing sources must be approved and in place before construction contracts are signed. HARSB does have funding to begin Phase 1 for the design of the new headworks, flow equalization and BNR treatment process to further reduce oxygen demanding substances in our effluent. HARSB will continue 100% reuse in the summer when Spokane River flows are below 2,000 CFS during the compliance period. Therefore, we will expand the transmission, storage, irrigation, crop production, and monitoring of the Reuse Farm, as required.

Year 2: Phase 1 Construction Starts. By the end of the first year, the plan is for funding to be secured for the Phase 1 Headworks, flow equalization and BNR construction; the design would be completed and approved by IDEQ and EPA. Phase 1 construction bidding would proceed so that BNR construction could begin in Year 2 after the winter conditions. HARSB will also submit to EPA and IDEQ its first annual report on the Toxics Management Plan and Phosphorus Management Plan.

Year 3: Phase 1 Construction Completed. We expect the third year of the compliance schedule will see the completion of the Phase 1 construction of the headworks, flow equalization and BNR treatment systems. Phase 1 start-up, testing, BNR operation optimization and full-scale operation of the HARSB BNR facilities is also expected to occur. The new BNR treatment system will be a fundamental change in operations that will drastically alter the physical layout of the current facility as well as the plant biological operations. It will require at least a year of BNR operations to

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optimize the process control under the operating conditions of four weather seasons. Construction of expanded reuse facilities is expected to begin during the summer.

Year 4: Phase 1 BNR Operation, Evaluation, Tertiary Pilot Scale Design and Procurement.

The first year of BNR treatment optimization will provide the data for selecting the final tertiary treatment system. HARSB will pilot test the most promising phosphorus removal technologies to meet the final permit limits on the new optimized BNR effluent. Pilot testing equipment financing, design, procurement, and pilot plant performance plan will be prepared and submitted concurrently with the optimization of the BNR facilities. Phosphorus removal will likely utilize various combinations of chemical addition, mixing, flocculation, settling and filtration. Again, HARSB would evaluate the need for interim fee and/or rate adjustments to support the pilot plant design, construction and operation. HARSB's biological phosphorus removal and oxidation ditch technology must be pilot tested for a year to evaluate compliance with the very low projected effluent limits. Since treatment processes can dramatically change with the character of water that will feed the pilot units and full scale facility, the tertiary treatment system planning, design and construction will follow HARSB's pilot work results. Construction, start-up and operation of the pilot-scale installation is expected to start by the end of the fourth year. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and the Phosphorus Management Plan.

Year 5: Phase 1 Operation, Tertiary Pilot Construction and Start-up. Operation of the pilot-scale tertiary treatment system testing is expected to occur through the fifth year. The application for the next NPDES permit must be submitted no later than 180 days before the expiration date of the current permit. Earlier timeline elements must be approved and completed to move forward with the facility upgrades. BNR operation and growing season reuse will continue with gathering of phosphorus bioavailability and biosolids production data, as necessary. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and the Phosphorus Management Plan.

Year 6: Phase 1 Operation, Tertiary Pilot Completed, Results Reviewed. Pilot-scale data analyses for the various tertiary treatment combinations during the HARSB pilot-scale tertiary treatment systems (chemical types, mixing, enhanced settling, and filtration) will be evaluated. The data will be compiled and submitted in report form for approval by IDEQ and EPA. The report will include information on impacts to biosolids processing and disposal, as well as the bioavailability of various phosphorus species, effectiveness in meeting WLAs, costs of the treatment options and effects of chemical addition on the potential ultraviolet light or ozone disinfection systems. HARSB will update the Facility Plan with any changes in technology, performance or costs that have been determined during the first five years of effort. The tertiary treatment plant design would begin. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and Phosphorus Management Plan.

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Year 7: Phase 2 Tertiary Design Completed. The pilot-scale tertiary treatment technology plant design will be finalized and submitted to EPA and IDEQ for approval. HARSB must secure necessary funding prior to construction contracts being signed. Assuming the funding is received, the construction of the tertiary improvements will begin in the latter part of Year 7. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and the Phosphorus Management Plan.

Year 8: Phase 2 Tertiary Construction. In the eighth year construction of the tertiary treatment plant improvements will be completed, assuming that the funding efforts were successful in Year 7. If funding is not approved in Year 7, HARSB will attempt another public outreach effort and/or seek an emergency declaration and judicial ruling on the “ordinary and necessary” nature of the proposed expenditures. BNR and growing season reuse will continue with gathering of bioavailability and biosolids production data, as necessary. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and the Phosphorus Management Plan.

Year 9: Phase 2 Tertiary Operational Testing. Assuming that funding is in place, the ninth year of the compliance cycle will see operation of the HARSB tertiary treatment plant improvements necessary to meet the D.O. TMDL. All additional work to optimize the processes must occur with full-scale demonstration of process performance by late in Year 9 to meet the final permit limits. Year 9 facility operation has little to no schedule flexibility to account for unforeseen obstacles from earlier activities such as securing adequate and timely financing. Too many previous activities rely on sequentially completing multiple tasks to expect complete permit compliance in Year 9. HARSB’s ability to divert some of their flow to the Reuse Farm will be critical to assure compliance in Year 10. Filter rates, cleaning cycles, side-stream impacts, biosolids production, and phosphorus bioavailability data will be evaluated. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and the Phosphorus Management Plan.

Year 10: New Tertiary Treatment System Fully Operational. Given the timely approval of funding through each phase, Year 10 is expected to be the first year of full compliance. It would also be the year that HARSB reapplies for its NPDES permit no later than 180 days before the expiration date of the current permit.

As the compliance schedule comes to a close, HARSB expects to actively participate with WDOE and the Spokane River Stewardship Partners to reevaluate the TMDL and the needed water quality improvements in the Spokane River and Lake Spokane. Additionally, HARSB will work with its member entities to re-evaluate their growth projections and determine the steps necessary to provide reliable capacity for their citizens. For example, by Year 10, reuse projects that protect the Special Resource Aquifer may be more readily accepted and documented. Further, the bioavailability of phosphorus after these aggressive tertiary treatment efforts may prove to be a small fraction of the total phosphorus and more protective of the receiving water than previously understood. HARSB will submit to the EPA and IDEQ an annual report on the Toxic Management Plan and the Phosphorus Management Plan.

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Proposed Idaho 401 Certification Compliance Schedule Language

Based on the discussion above, HARSB would support the following compliance schedule language in the Idaho 401 Certification and the draft NPDES permit:

1. By one (1) year after the effective date of the final permit, the permittee must provide a preliminary engineering report to EPA and IDEQ outlining estimated costs and schedules for completing capacity expansion and implementation of technologies to achieve final effluent limitations. This schedule must include a timeline for fully scalable pilot testing and results of any testing conducted to date.
2. By six (6) years after the effective date of the final permit, the permittee must provide written notice to EPA and IDEQ that fully scalable pilot testing of the technology that will be employed to achieve the final limits has been completed and must submit a summary report of results and plan for implementation. This notice can be made as part of other reporting requirements so long as it is clearly called out in the report
3. By seven (7) years after the effective date of the final permit, the permittee must provide EPA and DEQ with written notice that design has been completed and bids have been awarded to begin construction to achieve final effluent limitations. This notice can be made as part of other reporting requirements so long as it is clearly called out in the report.
4. By eight (8) years after the effective date of the final permit, the permittee must provide EPA and DEQ with written notice that construction has been completed on the facilities to achieve final effluent limitations. This notice can be made as part of other reporting requirements so long as it is clearly called out in the report.
5. By ten (10) years after the effective date of the final permit, the permittee must provide EPA and DEQ with a written report providing details of a completed start up and optimization phase of the new treatment system and must achieve compliance with the final effluent limitations of Part I.B. The report shall include two years of effluent data demonstrating that final effluent limits can be achieved (the two years of data do not have to consistently meet final effluent limits but demonstrate that at the end of this period final limits can be met).
6. By year six (6), seven (7), and eight (8) after the effective date of the final permit, the permittee must submit to EPA and DEQ progress reports, which outline the progress made toward achieving compliance with the total phosphorus and CBOD5 effluent limitations. At a minimum, the reports must include:
 - a. An assessment of the previous year of effluent data and comparison to the interim effluent limits.

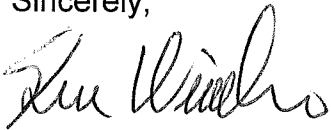
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- b. A report on progress made toward meeting the final effluent limits.
- c. Further actions and milestones targeted for the upcoming year.

Summary:

HARSB recognizes the need to move forward to protect the Spokane River, Lake Spokane and our Rathdrum Prairie Aquifer and is prepared to take these steps. These efforts will not be easy and they will be expensive. We must take the steps in a thoughtful and proactive manner that allows for review of data and optimization of facilities and that fully engages the public with their costs, benefits and full impacts on our community. We believe that we have laid out a compliance schedule that will accomplish these goals in a responsive and responsible manner. We look forward to your comments and working with EPA and IDEQ to achieve our mutual objectives for the public's benefit.

Sincerely,




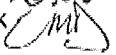
Ken Windram, Administrator
Hayden Area Regional Sewer Board

cc: Dan Redline – IDEQ
HARSB Board

Enclosures;

MEMORANDUM

TO: The Idaho Department of Environmental Quality

FROM: Gary G. Allen 
Elizabeth M. Donick 

RE: Interpretation of IAC Section 58.01.02.055.04 Regarding Metals Limits in Draft NPDES Permits for the Hayden Area Regional Sewer Board and the City of Post Falls

DATE: February 29, 2012

On January 18, 2012, the Idaho Department of Environmental Quality ("IDEQ") completed a draft water quality certification (the "Draft 401 Certification") of the Hayden Area Regional Sewer Board's ("HARSB") draft National Pollution Discharge Elimination System ("NPDES") permit pursuant to Section 401(a)(1) of the Clean Water Act ("CWA"), 33 U.S.C. Section 1341(a)(1), and Idaho Code Sections 39-101 *et seq.* and 39-3601 *et seq.* With regard to the Draft 401 Certification and HARSB's draft NPDES permit, IDEQ has offered a preliminary interpretation of Idaho Administrative Code ("IAC") Section 58.01.02.055.04 (Section 55.04) that requires no increase in the mass loading of lead, cadmium, zinc and phosphorus, the constituents for which the Spokane River is water quality limited and for which no Idaho TMDL has been adopted. EPA and IDEQ address these limits in various ways in the draft NPDES permit and the Draft 401 Certification. The draft NPDES permit limits HARSB's discharges of lead and zinc to the mass loads permitted in HARSB's 1999 permit, although these discharges are allowed year-round as compared to a seasonal discharge in HARSB's current permit. The Draft 401 Certification proposes to add cadmium and phosphorus mass limits based on current actual loading.

This memorandum outlines alternative interpretations of Section 55.04 that focus on concentration as opposed to mass. We believe these interpretations comply with the law and do not require the imposition of effluent limitations based on currently permitted mass limits or current actual mass loading and do not require any seasonal limitation on loading. The memorandum also outlines our concerns regarding the legality of limiting the discharge to the currently permitted mass limits or current actual mass loading.

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Questions Presented

1. Can Section 55.04 be lawfully interpreted to allow effluent mass limitations for lead, cadmium and zinc in the HARSB and City of Post Falls ("Post Falls") NPDES permits to be set based on the concentration allowed by the water quality criteria end-of-pipe multiplied by the current design flow?
2. Can Section 55.04 be lawfully interpreted to set effluent mass limitations for lead, cadmium and zinc in the HARSB and Post Falls NPDES permits at the existing actual or permitted discharge levels?
3. Is HARSB's phosphorus discharge subject to an "equivalent process" comparable to a TMDL that would exempt it from Section 55.04?

Short Answers

1. Yes. Section 55.04 can be read to allow increased mass loading at concentrations that comply with the water quality criteria where the criteria regulate concentration instead of mass. Here, the existing effluent limitations for HARSB and Post Falls are set at the water quality criteria without mixing zones. Because the concentration of lead, cadmium or zinc is not allowed to increase above the criteria, there is no "increased discharge of pollutants" to trigger Section 55.04. Further, the "criteria end-of-pipe" limitations and reasonable potential analysis performed by EPA constitute "interim measures" that "ensure that discharges of pollutants of concern remain constant or decrease within the watershed." Draft 401 Certification at 1.
2. Likely no. The interpretation of Section 55.04 in the Draft 401 Certification and the draft NPDES permits likely violates Idaho Code Section 39-3601, which states that "the rules promulgated under this chapter [shall] not impose requirements beyond those of the federal clean water act." Idaho Code § 39-3601 (emphasis added). Further, imposing limitations based on actual or currently permitted mass loading appears to be arbitrary because the mass loading is irrelevant to compliance with the water quality criteria except as it relates to concentration.
3. Yes. The phosphorus limits in HARSB and Post Falls' draft NPDES permits were developed using on a reasonable potential analysis based on the State of Washington's TMDL for dissolved oxygen for the Spokane River (the "Washington DO TMDL"). This TMDL strictly regulates phosphorus discharges and seems clearly to qualify as an equivalent process more than sufficient to protect Idaho waters from nuisance aquatic growth.

Analysis

HARSB and Post Falls operate their facilities under NPDES permits issued in 1999 that include effluent limitations for lead and zinc, and include a monitoring requirement for cadmium as follows:

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	HARSB	Post Falls
Lead	Average Monthly Limit – 2.66 µg/L, 0.033 lbs/day Maximum Daily Limit – 3.76 µg/L , 0.047 lbs/day	Average Monthly Limit – 2.05 µg/L, 0.059 lb/day Maximum Daily Limit – 3.79 µg/L , 0.110 lb/day
Cadmium	Monthly monitoring requirement - 1/month	Monthly monitoring requirement - 1/month
Zinc	Average Monthly Limit – 88.2 µg/L, 1.10 lbs/day Maximum Daily Limit – 112.0 µg/L , 1.4 lbs/day	Average Monthly Limit – 84.3 µg/L, 2.45 lb/day Maximum Daily Limit – 115 µg/L , 3.34 lb/day

In the 1999 permits, the EPA established “criteria end-of-pipe” water quality-based effluent limits for lead and zinc. EPA also applied criteria at the end-of-pipe when it conducted a reasonable potential analysis for cadmium and determined the discharges do not have a reasonable potential to cause or contribute to excursions above water quality standards for cadmium. The 1999 concentration limits are set at the water quality standards without a mixing zone because ambient water quality exceeds the standards so there is no additional loading capacity. IAC Section 58.01.02.010.54 defines loading capacity as “[t]he greatest amount of pollutant loading that a water can receive without violating water quality standards.” The mass limits simply multiply the allowable concentration by the design capacity declared in the 1999 permit application, with appropriate averaging calculations. The 1999 permits expired in 2004 and are subject to administrative extensions until the revised permits are issued.

EPA and IDEQ are collaboratively working on revising the NPDES permits for HARSB and Post Falls. In the Draft 401 Certification, IDEQ explains that the Spokane River is listed in the 2010 Integrated Report as “high priority” for TMDL development, and that this assessment unit of the Spokane River is not supporting its cold water aquatic life beneficial use. Total phosphorus, cadmium, lead and zinc concentrations have been detected in the Spokane River above the criteria set to protect cold water aquatic life uses.

IDEQ then sets forth a brief analysis of Section 55.04 stating that “DEQ must ensure that discharges of pollutants of concern remain constant or decrease within the watershed.” Draft 401 Certification at 1. IDEQ’s interpretation is that, in this context, “load” means mass loading. EPA follows IDEQ’s analysis in the draft NPDES permit, explaining that effluent limits for lead and zinc will remain at the same level as the 1999 permit, and proposes to add an average monthly mass effluent limit for cadmium of 0.027 µg/L, 0.00 lbs/day, per IDEQ’s instructions in the Draft 401 Certification. In calculating this new cadmium limit, IDEQ states that it averaged pollutant concentrations and loads from

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the 2006-2011 daily monitoring reports. Draft 401 Certification at 2. We read this to mean the limit is based on actual flows, not the 1999 permitted flows. The limits for lead and zinc in the current permit, issued in 1999, were derived using the design flows upon which the 1999 permit applications were based. The design flows of the facilities have increased in the current permit renewal applications, but IDEQ and EPA do not propose to increase the allowable mass loading, based on IDEQ's interpretation of Section 55.04.

The Draft 401 Certification further proposes effluent limitations for phosphorus during the January and February timeframe, the only months of the year when phosphorus limits are not required by EPA's reasonable potential analysis based on the Washington DO TMDL.

The interpretations of Section 55.04 in the Draft 401 Certification and the HARSB draft NPDES permit create significant problems for HARSB and Post Falls because the imposition of mass-based limits, set below design flows, will eventually create an effective cap on growth. As far as we can tell, there would be no environmental benefit from these limits.

The capital and operating costs associated with metals treatment are extremely high and likely are unaffordable given the significant expenses HARSB and Post Falls will already incur in complying with the phosphorus, five day carbonaceous biochemical oxygen demand ("CBOD₅") and ammonia limits in the draft NPDES permits. In order to comply with the mass limits for lead, cadmium and zinc, HARSB and Post falls may be forced to limit sewer connections to the detriment of their respective communities, and would have to assess other drastic possibilities in determining how to comply with these limits.

- 1. It is reasonable to interpret Section 55.04 to regulate concentration rather than mass in the context of the lead, cadmium and zinc water quality criteria.**

Section 55.04 contains the requirements for discharges to high priority water quality limited waters and states as follows:

04. High Priority Provisions. Until a TMDL or equivalent process is completed for a high priority water quality limited water body, new or increased discharge of pollutants which have caused the water quality limited listing may be allowed if interim changes, such as pollutant trading, or some other approach for the pollutant(s) of concern are implemented and the total load remains constant or decreases within the watershed. Interim changes shall maximize the use of cost effective measures to cap or decrease controllable human-caused discharges from point and nonpoint sources. Once the TMDL or equivalent process is completed, any new or increased discharge of causative pollutants will be allowed only if consistent with the approved TMDL. Nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis.

IAC § 58.01.02.055.04 (emphasis added).

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We see two interpretations of Section 55.04 that do not require retaining the mass limits from the 1999 permits or basing mass limits on the current levels of actual facility flows. We recognize that mass limits are required for the NPDES permits. However, these are normally based on the design flows in the current permit applications, and not on current flows or design flows that happened to be in the 1999 permit applications.

The first interpretation is that discharging increased mass at concentrations that comply with the water quality criteria is not an “increased discharge of pollutants.” For all practical purposes, mass loading is irrelevant to the water quality standards for these constituents. The applicable water quality criteria for protection of aquatic life regulate only the maximum concentrations of lead, cadmium and zinc in the water column, both for acute criteria and chronic criteria. IAC § 58.01.02.210.01-03. Unless otherwise specified in the rules, the water quality rules defines acute criteria as, “the maximum instantaneous or one (1) hour average concentration of a toxic substance or effluent which ensures adequate protection of sensitive species of aquatic organisms from acute toxicity due to exposure to the toxic substance or effluent.” IAC § 58.01.02.10.03 (emphasis added). Chronic criteria are defined in the water quality rules as “the four (4) day average concentration of a toxic substance or effluent which ensures adequate protection of sensitive species of aquatic organisms from chronic toxicity due to exposure to the toxic substance or effluent.” IAC § 58.01.02.10.14 (emphasis added). In other words, mass is only relevant in relation to concentration. Thus, an increase in mass is only an “increased discharge of pollutants” if the concentration also increases. HARSB and Post Falls do not contribute to the ambient metals problems in the Spokane River any more by discharging 1000 cubic feet per second (“CFS”) of water that complies with the standard than by discharging 1 CFS. In fact, the more water HARSB and Post Falls discharge that is in compliance with the water quality standards, the better the water quality becomes in the Spokane River.

In addition, HARSB’s discharges of water at criteria end-of-pipe comply with Section 55.04 because “interim changes, such as pollutant trading, or some other approach for the pollutant(s) of concern [have been] implemented and the total load remains constant or decreases within the watershed.” IAC § Section 58.01.02.055.04. The current, strict effluent limitations for lead and zinc in the HARSB and Post Falls permits, in connection with EPA’s supporting reasonable potential analysis outlined in the corresponding fact sheets, are enforceable “interim changes” ensuring that the “total load remains constant or decreases within the watershed.” The term “load” is not defined in IDEQ’s water quality regulations and there is no requirement that it refer only to mass. Further, we see no basis to limit load to mean “mass” where mass is irrelevant to compliance with the water quality criteria except as a proxy for concentrations.

2. Section 55.04 does not comply with Idaho law to the extent it requires effluent mass limitations based on the 1999 design flows or existing actual flows.

Idaho law does not require IDEQ to interpret Section 55.04 to limit the mass of lead, cadmium and zinc discharges in HARSB’s NPDES permit to existing design flows or actual flows as long as concentrations are appropriately limited. To the contrary, Idaho law appears to prohibit this interpretation.

ATTACHMENT A

Nothing in Idaho law requires an interpretation of Section 55.04 that imposes metals mass limits based on currently permitted flows or current actual flows. The direct implementing statute for Section 55.04 is Idaho Code Section 39-3610. This section states, in pertinent part:

The director shall assure, in a manner consistent with existing statute or rules, that for each category of water body, as described in section 39-3609(1) through (3), Idaho Code, the following limitations shall apply:

- (1) For waters in the "high," category a total maximum daily load or equivalent process as described in this chapter shall be undertaken. Provided however, that nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis.

Idaho Code § 39-3610 (1). This statute, aside from clearly requiring a TMDL or equivalent process for high priority water bodies, does not require, nor does it include any language suggesting an intention to require, that Section 55.04 imposes a no increase in mass loading requirement. Further, there is no other provision in the Idaho Surface Water Quality Act or Idaho law that directly requires the imposition of "no increased load" provisions or the interpretation of the term "load" to refer only to "mass."

Consistent with the CWA, Idaho Code Section 39-3603 requires that "[t]he existing instream beneficial uses of each water body and the level of water quality necessary to protect those uses shall be maintained and protected." I.C. §39-3603(1)(a). This provision provides authority for IDEQ to "protect the status quo" and prohibit increased loads in impaired water bodies when a TMDL has yet to be established. However, the Draft 401 Certification provides no explanation of how increased mass loads at concentrations that comply with the water quality standards have any adverse impact on beneficial uses, and we do not expect any adverse impact could be shown.

In fact, Idaho law appears to prohibit IDEQ from imposing mass limits that are beyond the scope of the CWA or that exceed the requirements of federal law. Idaho Code § 39-3601 explains the legislature's intent for Idaho water quality standards and the related rules promulgated under the Idaho Code, and states, in relevant part:

It is the intent of the legislature that the state of Idaho fully meet the goals and requirements of the federal clean water act and that the rules promulgated under this chapter not impose requirements beyond those of the federal clean water act.

I.C. § 39-3601. This language expressly prohibits the "rules" governing discharges to impaired water bodies from imposing requirements beyond what federal law requires.

Nothing in the Clean Water Act mandates the proposed mass limits. The closest federal regulatory provision is 40 C.F.R Section 131.12, which mirrors Idaho Code Section 39-3603 and requires protection and maintenance of beneficial uses. Further, no court has interpreted the CWA to impose requirements analogous to the mass limits in the Draft 401 Certification and the draft HARSB NPDES permit. The United States Court of Appeals for the Ninth Circuit addressed issues surrounding discharges into a water body already in excess of its standards in *Friends of Pinto Creek v. U.S.E.P.A.*, 504 F.3d

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1007 (9th Cir. 2007). However, *Pinto Creek* does not inform the analysis of Section 55.04 because *Pinto Creek* specifically addressed the application of 40 C.F.R. Section 122.4(i), which applies only to new dischargers. *Id.* at 1011-1012. The regulation expressly states that “[n]o permit may be issued ... (i) [t]o a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to a violation of water quality standards.” 40 C.F.R. § 122.4(i) (emphasis added). HARSB and Post Falls are current existing dischargers in the process of working towards renewed permits and do not fall under the purview of 40 C.F.R. Section 122.4(i). Thus, *Pinto Creek* does not apply.

The fact that the CWA does not require a prohibition on increased mass loading is reinforced by several additional points. First, the EPA’s draft 2007 Fact Sheets for the HARSB and Post Falls permits increase the allowable mass for Post Falls and HARSB based on design flows. For example, in addition to acknowledging the issue that there is no approved TMDL in place for the relevant sections of the Spokane River, EPA explains the basis for increased mass limits in the 2007 HARSB Fact Sheet and states “mass limitations for certain pollutants,” have been increased “because the design flow of the facility has increased.” HARSB 2007 Fact Sheet at 20. EPA further explains that mass limits are back-calculated from the concentration limits based on the design flow of the facility. *Id.* at 21.

Second, the NPDES permits issued in Washington do not include mass-based limits comparable to what IDEQ is proposing to require in the 401 Certification. Washington Department of Ecology’s 1999 Spokane River Dissolved Metals TMDL (the “Spokane Metals TMDL”) indicates “a concentration measure is appropriate,” for dissolved metals in the Spokane River, “because the relationship between the effluent-based criterion and the receiving water quality hold for all effluent flow rates and critical conditions in the Spokane River.” Spokane Metals TMDL at 2. The Spokane Metals TMDL further described the wasteload allocation as “derived by either meeting aquatic life toxicity criteria at effluent hardness at the end-of-pipe, or based on maintaining existing concentrations of metals in effluent using performance based limits with an added 10 percent buffer,” and load allocation as “the concentration required to meet the chronic criterion at the outlet of Lake Coeur d’Alene.” *Id.* at 2.

Finally, our view is that an interpretation of Section 55.04 that limits mass loading to prior design flows or current actual flows is simply arbitrary. A discharge that complies with the water quality standards for lead, cadmium and zinc at a lower flow has no more adverse impact on water quality than a discharge at a higher flow, notwithstanding that the mass of the regulated constituents increases. Since there is no nexus between mass and compliance with the water quality standards that is not fully addressed by concentration limits, we see no basis to calculate mass-based effluent limits for lead, cadmium and zinc except based on design flow.

HARSB and Post Falls look forward to discussing these significant concerns with IDEQ and developing a resolution of these. We have presented what we believe are acceptable alternatives, but Post Falls and HARSB are open to other approaches that reach an acceptable result.

3. Section 55.04 does not require additional phosphorus limits because the phosphorus limits in the HARSB and Post Falls NPDES permits were developed based on the Washington DO TMDL, which is an “equivalent process” to an Idaho nutrient TMDL.

Section 55.04 applies “[u]ntil a TMDL or equivalent process is completed for a high priority water quality limited water body.” IAC § 58.01.02.055.04. The draft NPDES permits for HARSB and

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Post Falls contain extremely strict effluent limitations for phosphorus, ammonia and CBOD₅ based on the Washington DO TMDL. Strictly speaking, EPA is not applying the TMDL to the Idaho dischargers, but is applying TMDL-based limits based on a reasonable potential analysis. Thus, phosphorus discharges clearly are subject to an "equivalent process" to a TMDL. The Washington TMDL does not regulate phosphorus discharges in November and December only because extensive modeling showed that discharges in this timeframe had no impact on dissolved oxygen levels downstream. Idaho water quality standards also recognize the importance of seasonality of nutrient discharges, as the Idaho narrative nutrient criteria require that "[s]urface waters of the state shall be free from excess nutrients that can cause visible slime growths or other nuisance aquatic growths impairing designated beneficial uses." IAC § 58.01.02.200.06. There is no reason to believe that the requirements EPA is imposing to address dissolved oxygen impacts in Lake Spokane are not sufficient to address potential nutrient impacts in Idaho.

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